

Adaptive Many-Core Architectures and Systems workshop

York, UK, 13-15th June 2018

Conference programme

Day 1 (Wednesday, June 13th)

10:30	Registration	
11:00	Welcome	
11:10	Keynote 1	Eric Van Hensbergen (ARM) <i>Software and Large Scale Systems: ARM's co-design approach to many-core</i>
12:00	S1.1	Kyle Madden, Jim Harkin, Liam McDaid, Chris Nugent <i>Network-on-Chip Denial of Service Attack Detection using Spiking Neural Network</i>
12:25	S1.2	Dave McEwan <i>Understanding Complex Architectures and Systems</i>
12:50	Lunch	
13:40	Keynote 2	Gianluca Tempesti (University of York) <i>Continuous on-line adaptation in many-core systems: The GRACEFUL project</i>
14:30	S1.3	Richard Redpath, Pedro Campos, Gianluca Tempesti, Martin A Trefzer, Andy M Tyrrell <i>The Graceful Hardware Platform: A System for Exploring Graceful Degradation and Amelioration in Network on Chips</i>
14:55	S1.4	Ali Abuassal, Gianluca Tempesti, Martin Trefzer <i>A novel bio-inspired run-time management algorithm for many-core systems</i>
15:20	Coffee break	
16:00	Keynote 3	Geoff Merrett (University of Southampton) <i>Run-time power management of multi- and many-core systems</i>
16:50	S1.5	Ilias Vougioukas, Andreas Sandberg, Stephan Diestelhorst, Bashir M. Al-Hashimi, Geoff V. Merrett <i>Will it Blend? Merging Heterogeneous Cores</i>
17:15	S1.6	Amit Kumar Singh, Geoff V. Merrett, Bashir M. Al-Hashimi <i>Adaptation in Heterogeneous Multi-core SoCs</i>
17:40	End of Day 1	
18:30	Pub night (Brew York, Walmgate, York)	

Day 2 (Thursday, June 14th)

9:00	Keynote 4	Nikil Dutt (University of California, Irvine) <i>From Here to MARS: Self-Aware Middleware for Adaptive Reflective Computer Systems</i>
9:50	S2.1	Jonathan Beaumont, Shane Fleming, Matthew Naylor, Andrew Brown, Andrey Mokhov, Simon Moore, David Thomas <i>POETS abstract</i>
10:15	S2.2	Graeme M. Bragg, Domenico Balsamo, Charles Leech, Geoff V. Merrett <i>The PRiME Framework: Application- & Platform-agnostic System Management</i>
10:40	Coffee break	
11:10	Keynote 5	Steve Furber (University of Manchester) <i>SpiNNaker - economy and reliability at scale</i>
12:00	S2.3	Simon Davidson, Steve Furber <i>Dynamic Re-routing of Traffic on SpiNNaker to Support Graceful Task Migration</i>
12:25	S2.4	Jose Nunez-Yanez <i>Energy proportional binarized neural networks with adaptive voltage, frequency and logic scaling</i>
12:50	Lunch	

13:40	Keynote 6	Giulio Gambardella (Xilinx) <i>Low-latency inference of Quantized Neural Networks on Xilinx SoC</i>
14:30	Poster and Demo session + coffee break	
16:00	Keynote 7	Jürgen Teich (FAU Erlangen-Nürnberg) <i>Methodologies for Application Mapping for NoC-Based MPSOCs</i>
16:50	S2.5	Robert Stewart, Evgenij Belikov and Hans-Wolfgang Loidl <i>Graph Reduction Hardware Revisited</i>
17:15	S2.6	Dejice Jacob, Jeremy Singer <i>Accelerating Interpreted Languages on Heterogeneous Architectures by Enabling Computational Variants</i>
17:40	End of Day 2	
18:30	Drinks reception and conference dinner – King’s Manor, York	

Day 3 (Friday, June 15th)

9:00	Keynote 8	Benoît Dupont de Dinechin (Kalray) <i>Manycore Accelerators beyond GPU Architecture</i>
9:50	S3.1	Matthew J. Walker, Stephan Diestelhorst, Geoff V. Merrett, Bashir M. Al-Hashimi <i>Accurate and Stable Empirical CPU Power Modelling for Multi- and Many-Core Systems</i>
10:15	S3.2	Qian Ding, Benjamin J. Fletcher, Terrence Mak <i>Globally Wireless Locally Wired (GloWiLoW): A Clock Distribution Network for Many-Core Systems</i>
10:40	Coffee break	
11:10	Keynote 9	Simon Burton (Bosch) <i>Making the case for the safety of machine learning for highly automated driving</i>
12:00	S3.3	Ghaith Tarawneh, Andrey Mokhov <i>Solving Combinatorial Problems on Adaptive Many Core Architectures</i>
12:25	S3.4	JunKyu Lee, Hans Vandierendonck, Dimitrios S. Nikolopoulos <i>Adaptive Mixed-Precision Kernel Recursive Least Squares</i>
12:50	Lunch	
13:40	Keynote 10	Alan Burns (University of York) <i>Hard Real-Time Systems and Many-Core Platforms</i>
14:30	S3.5	Leandro Soares Indrusiak <i>Evolutionary Optimisation of Real-Time Many-Cores</i>
14:55	S3.6	Matthew Rowlings, Andy M. Tyrrell, Martin A. Trefzer <i>Adaptive Hardware Systems on the Centurion Many-Core Platform</i>
15:20	Final words	
15:30	End of conference	